AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of processing a dielectric film, the method comprising:

providing a substrate having a fluoro-carbon dielectric film deposited thereon, the film having an exposed surface containing contaminants; and

treating the exposed surface with a supercritical carbon dioxide fluid to clean the exposed surface of the contaminants and provide surface termination,

wherein the supercritical carbon dioxide fluid further comprises a solvent, and

wherein the solvent comprises an alcohol or a silicon-containing chemical, or a combination thereof.

2. (Original) The method according to claim 1, wherein the contaminants comprise CH_x, H_2O, OH, or HF, or a combination of two or more thereof.

3-4. Canceled.

5. (Currently Amended) The method according to claim [[4]]1, wherein the alcohol comprises methanol, ethanol, propanol, or butanol, or a combination of two or more thereof.

6. (Currently Amended) The method according to claim [[4]]1, wherein the silicon-containing chemical comprises hexamethyldisilane, hexamethyldisilazane, dimethylsilyldiethylamine, tetramethyldisilazane, trimethylsilyldimethylamine, dimethylsilyldimethylamine, trimethylsilyldiethylamine, bis-trimethylsilyl-urea, bis(dimethylamino)methyl silane, bis(dimethylamino)dimethyl silane, dimethylaminopentamethyldisilane, or dimethylaminodimethyldisilane, or a combination of two or more thereof.

7. (Original) The method according to claim 1, wherein the surface termination comprises C-F functional groups or Si–Me_3 functional groups.

8. (Currently Amended) The method according to claim 1, wherein the treating comprises:

performing a first treatment wherein the supercritical carbon dioxide fluid contains ~~an~~ the alcohol solvent; and

performing a second treatment wherein the supercritical carbon dioxide fluid contains ~~a~~ the silicon-containing chemical solvent.

9. (Original) The method according to claim 8, wherein the alcohol comprises methanol, ethanol, propanol, or butanol, or a combination of two or more thereof.

10. (Original) The method according to claim 8, wherein the silicon-containing chemical comprises hexamethyldisilane, hexamethyldisilazane, dimethylsilyldiethylamine, tetramethyldisilazane, trimethylsilyldimethylamine, dimethylsilyldimethylamine, trimethylsilyldiethylamine, bis-trimethylsilyl-urea, bis(dimethylamino)methyl silane, bis(dimethylamino)dimethyl silane, dimethylaminopentamethyldisilane, or dimethylaminodimethyldisilane, or a combination of two or more thereof.

11. (Original) The method according to claim 1, wherein the fluoro-carbon film comprises a nitrated fluoro-carbon film.

12. (Original) The method according to claim 1, further comprising:

depositing a metal-containing film onto the treated surface of the fluoro-carbon film, wherein the surface termination improves adhesion of the metal-containing film to the fluoro-carbon film.

13. (Currently Amended) The method according to claim ~~10~~12, wherein the metal-containing film comprises tantalum.

14. (Currently Amended) A method of processing a dielectric film, the method comprising:

providing a substrate having a patterned fluoro-carbon dielectric film formed thereon, the patterned fluoro-carbon dielectric film having one or more vias or trenches, or a combination thereof, and the patterned fluoro-carbon dielectric film having an exposed surface containing contaminants; and

treating the exposed surface with a supercritical carbon dioxide fluid and a solvent to clean the exposed surface of the contaminants and provide surface termination.

15. (Original) The method according to claim 14, wherein the contaminants comprise CH_x, H_2O, OH, or HF, or a combination of two or more thereof.

16. Canceled.

17. (Currently Amended) The method according to claim ~~16~~14, wherein the solvent comprises an alcohol or a silicon-containing chemical, or a combination thereof.

18. (Original) The method according to claim 17, wherein the alcohol comprises methanol, ethanol, propanol, or butanol, or a combination of two or more thereof.

19. (Original) The method according to claim 17, wherein the silicon-containing chemical comprises hexamethyldisilane, hexamethyldisilazane, dimethylsilyldiethylamine, tetramethyldisilazane, trimethylsilyldimethylamine, dimethylsilyldimethylamine,

trimethylsilyldiethylamine, bis-trimethylsilyl-urea, bis(dimethylamino)methyl silane, bis(dimethylamino)dimethyl silane, dimethylaminopentamethyldisilane, dimethylaminodimethyldisilane, or a combination of two or more thereof.

20. (Original) The method according to claim 14, wherein the surface termination comprises C-F functional groups or Si–Me_3 functional groups.

21. (Currently Amended) The method according to claim 14, wherein the treating comprises:

performing a first treatment wherein the supercritical carbon dioxide fluid contains an alcohol as the solvent; and

performing a second treatment wherein the supercritical carbon dioxide fluid contains a silicon-containing chemical as the solvent.

22. (Original) The method according to claim 21, wherein the alcohol comprises methanol, ethanol, propanol, or butanol, or a combination of two or more thereof.

23. (Original) The method according to claim 21, wherein the silicon-containing chemical comprises hexamethyldisilane, hexamethyldisilazane, dimethylsilyldiethylamine, tetramethyldisilazane, trimethylsilyldimethylamine, dimethylsilyldimethylamine, trimethylsilyldiethylamine, bis-trimethylsilyl-urea, bis(dimethylamino)methyl silane, bis(dimethylamino)dimethyl silane, dimethylaminopentamethyldisilane, or dimethylaminodimethyldisilane, or a combination of two or more thereof.

24. (Original) The method according to claim 14, wherein the fluoro-carbon film comprises a nitrated fluoro-carbon film.

25. (Original) The method according to claim 14, further comprising:

depositing a metal-containing film onto the treated surface of the fluoro-carbon film, wherein the surface termination improves adhesion of the metal-containing film to the fluoro-carbon film.

26. (Original) The method according to claim 25, wherein the metal-containing film comprises tantalum.